

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-006097**Date Inspected:** 13-Mar-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1845**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower Fabrication**Summary of Items Observed:**

CWI Inspectors Mr. Wang Wen Zhong, Mr. Wu Ming Kai

On this date CALTRANS OSM Quality Assurance (QA) Inspector Mr. Paul Dawson arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

Tower Bay 10

This QA Inspector performed random ultrasonic inspections of approximately 10 percent length of North Tower Lift 2 Skin splice plate stiffener to skin plate D welds NSD1-SA223D/E-1, NSD1-SA223D/E-5, NSD1-SA223D/E-10, NSD1-SA223E/E-1, NSD1-SA223E/E-7, NSD1-SA223E/E-8 and NSD1-SA223E/E-15. These welds had previously been ultrasonically inspected and accepted by ZPMC inspection personnel. The QA Inspector observed the welds that were ultrasonically inspected by this QA Inspector appear to comply with AWS D1.5 UT requirements. For additional information on this inspection see the TL6027 Ultrasonic Test Report.

This QA Inspector performed random ultrasonic inspections of approximately 10 percent length of Lift 1 South Skin Splice Plate welds SSD1-A106-003, SSD1- SSD1-SA106-004, SSD1-SA106-005, SSD1-SA108-001, SSD1-SA108-002, SSD1-SA108-003, SSD1-SA108-004, SSD1-SA109-001, SSD1-SA109-002 and SSD1-SA109-003. These welds had previously been ultrasonically inspected and accepted by ZPMC inspection personnel. The QA Inspector observed the welds that were ultrasonically inspected by this QA Inspector appear to

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comply with AWS D1.5 UT requirements. For additional information on this inspection see the TL6027 Ultrasonic Test Report and the photograph below.

This QA Inspector performed random ultrasonic inspections of approximately 10 percent length of Lift 1 South tower strut plate weld SD1-SA183-23m-4-1. This weld had previously been ultrasonically inspected and accepted by ZPMC inspection personnel. The QA Inspector observed the weld that was ultrasonically inspected by this QA Inspector appear to comply with AWS D1.5 UT requirements. For additional information on this inspection see the TL6027 Ultrasonic Test Report.

ZPMC presented Caltrans QA with Notification of Witness Inspection document #002260 which states Lift 2 Skin D stiffener to skin plate WSD1-SA209D/D-7 is going to be ultrasonically inspected. The QA Inspector observed ZPMC has marked this weld as being ultrasonically accepted. A short while later a ZPMC welder preheated the end of this weld and added additional weld material to weld #7 to repair an area that had been visually rejected. The QA Inspector informed ZPMC ultrasonic inspectors and ZPMC QC representative Mr. Zhang Jiadi (Ken) that an additional ultrasonic inspection of this weld will be required due to this welding. Mr. Zhang Jiadi said this weld will be ultrasonically inspected after the weld is visually accepted.

The QA Inspector observed ZPMC welder Ms. Zhang Lingling stencil 207746 is using welding procedure specification WPS-B-T-2221-B-U3-C-S-2 to make submerged arc groove weld SSD1-FESA3-1E/E-44B. The QA Inspector observed ZPMC Quality Control personnel monitoring this welding and that the base material appears to be between 110°C and 230°C. Items observed by the QA Inspector appear to comply with project specifications.

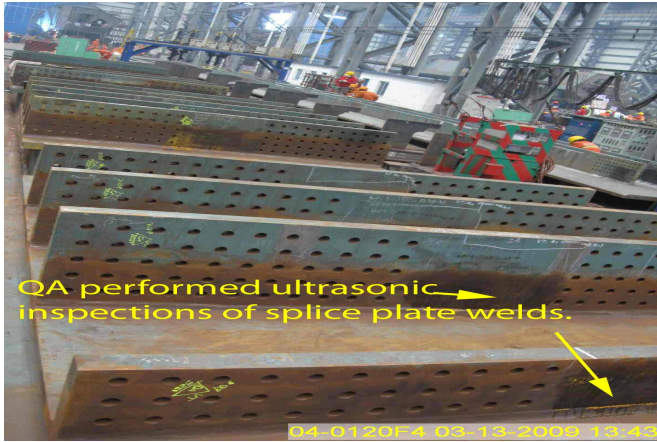
The QA Inspector observed ZPMC welder Ms. Liu Xiaoyan stencil 207745 is using welding procedure specification WPS-B-T-2221-B-U3-C-S-2 to make submerged arc groove weld SSD1-FDSA3-1A/D-1A. The QA Inspector observed ZPMC Quality Control personnel monitoring this welding and the QA Inspector observed ZPMC Quality Control personnel measuring Ms. Liu Xiaoyan having a welding current of approximately 330 amps and 30.0 volts. Items observed by the QA Inspector appear to comply with project specifications.

This QA Inspector observed ZPMC welder Mr. Jin Xiao Gang, stencil 053474 is the using flux cored welding process to make stiffener plate repairs to tower skin connection plate weld SA105-5 and the QA Inspector observed ZPMC Quality Control personnel measuring Mr. Jin Xiao Gang having a welding current of approximately 310 amps and 31.4 volts. Items observed by the QA Inspector appear to comply with project specifications.

This QA Inspector observed ZPMC welder Mr. Jiand Zhou, stencil 040261 is the using flux cored welding process to make stiffener plate repairs to tower skin connection plate weld SA105-5 and the QA Inspector observed ZPMC Quality Control personnel measuring Mr. Jiand Zhou having a welding current of approximately 320 amps and 31.5 volts. Items observed by the QA Inspector appear to comply with project specifications.

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Summary of Conversations:

See above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Serge Sinevod phone: 134-8257-0045 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer
